Measurement Solutions
in Forest and Field

Haglöf
SWEDEN

Haglöf Sweden®Borers

Increment Borers and Accessories

The wood core offers access to information on quality, age, growth, effects from fertilization, climate changes and more!

Haglöf Sweden's borers are used to determine increment, age and quality of trees. The extracted wood core gives inside details on climate effects, fertilization results, damages and diseases. The core is a valuable help both for research and in industrial production. In logging and lumber industry, borers are used to control quality and impregnation depth and to check for decay in poles. The field adapted Tree Core Reader allows for examination of wood cores up to 12cm/5" with core diameter up to 5.15mm/0.200". The high quality optics with 6X magnifying glass enables an accurate core reading and examination. The Haglöf Tree Core Reader is sturdy and built robust and can be used immediately after extracting the wood core from the tree.

The Tree Core Reader is delivered in a plastic safety carrying case with cleansing cloth and user's guide included. Tree core reader Art no 10-500-1016

And. Mattson Original

The Original increment borer since 1889

Haglöf Sweden produces and offers the market's largest assortment of different types and increment borer brands. Our original Mattson borers are produced in selected lengths and core diameters.

With genuine craftsmanship in every detail, these borers have been produced in Sweden since 1889. Mattson borers are delivered as complete increment borers including handle, borer bit and extractor. Borer bits and extractors can be purchased separately.

- **Swedish steel borer auger with a barrel-shaped tip**
- **Grip friendly handle with brass details**
- **Hand sharpened extractor with brass knob**
- **Core diameter available down to 3.5mm in assorted lengths**
- **Lengths from 100 mm to 500 mm**

With over a century of manufacturing expertise, the craftsmanship perfection in a Mattson borer ensures a durable precision product that you can rely on in the forest. With individually sharpened borer bit, a grip-friendly blue handle with brass details, a polished quality steel borer bit and stainless steel extractor with brass knob and unique teething.

MATTSON	INCREMENT BORER
10-200-1001	Mattson Increment Borer 200mm, 3.5mm 3-thread
10-200-1002	Mattson Increment Borer 200mm, 4.3mm 3-thread
10-200-1003	Mattson Increment Borer 250mm, 4.3mm 3-thread
10-200-1004	Mattson Increment Borer 300mm, 4.3mm 3-thread
10-200-1005	Mattson Increment Borer 100mm, 5.15mm 3-thread
10-200-1006	Mattson Increment Borer 150mm, 5.15mm 3-thread
10-200-1007	Mattson Increment Borer 200mm, 5.15mm 3-thread
10-200-1008	Mattson Increment Borer 250mm, 5.15mm 3-thread
10-200-1009	Mattson Increment Borer 300mm, 5.15mm 3-thread
10-200-1010	Mattson Increment Borer 400mm, 5.15mm 3-thread
10-200-1011	Mattson Increment Borer 500mm, 5.15mm 2-thread, "No 905"

Haglöf Sweden®Borers

The largest selection of increment borer sizes and models

Haglöf Sweden manufactures the world's largest assortment of increment borer brands, models and sizes. Haglöf Sweden increment borers have blue handles in grip friendly plastic material and a metallic lock. The borer bits are made from hardened steel with PTFE-coating for protection and reduced friction. The stainless steel extractors with metallic cap are shaped for easy extraction of the wood core.

- LENGTHS are available from 100 mm or 4" up to 1000 mm or 39". To obtain optimal penetration depth, the borer bit should be approximately half to three quarter of the tree diameter.
- CORE DIAMETERS: Haglöf standard core diameters are 4.3 mm or 5.15 mm (0.169" and 0.200"). 10 and 12 mm diameter borers are available in assorted lengths. These borers are often used to measure wood fibre lengths and quantitative analyses where large samples are necessary.
- THREADING: Most Haglöf Sweden borers are available with 2- or 3-threads on the borer bit. 2-threaded borers are recommended for hardwood. 3-threaded borers engage the wood faster and are the most commonly used model.
- SPECIAL coating is available for borer bits lengths 100 mm/4", 150 mm/6", 200 mm/8" and 250 mm/10".
- A COMPLETE increment borer includes handle, borer bit and extractor in selected length and model. Borer bits and extractors can be purchased separately.

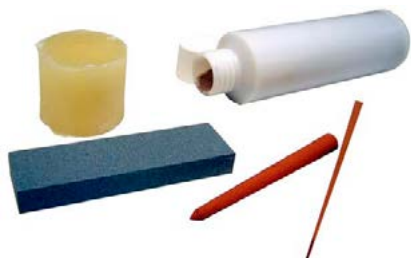| HAGLÖF	INCREMENT BORERS		
10-100-1001	100 mm/4", 4.3/0,169" core diam. 2-thr	10-100-1026	400 mm/16", 4.3/0,169" core diam. 3-thr
10-100-1002	100 mm/4", 4.3/0,169" core diam. 3-thr	10-100-1027	400 mm/16", 5.15/0,200" core diam. 2-thr
10-100-1003	100 mm/4", 5.15/0,200" core diam. 2-thr	10-100-1028	400 mm/16", 5.15/0.200" core diam.3-thr
10-100-1004	100 mm/4", 5.15/0,200" core diam. 3-thr	10-100-1029	450 mm/18", 4.3/0,169" core diam. 2-thr
10-100-1005	150 mm/6", 4.3/0,169" core diam. 2-thr	10-100-1030	450 mm/18", 4.3/0,169" core diam. 3-thr
10-100-1006	150 mm/6", 4.3/0,169" core diam. 3-thr	10-100-1031	450 mm/18", 5.15/0,200" core diam. 2-thr
10-100-1007	150 mm/6", 5.15/0,200" core diam. 2-thr	10-100-1032	450 mm/18", 5.15/0,200" core diam. 3-thr
10-100-1008	150 mm/6", 5.15/0,200" core diam. 3-thr	10-100-1033	500 mm/20", 4.3/0,169" core diam. 2-thr
10-100-1009	200 mm/8", 4.3/0,169" core diam. 2-thr	10-100-1034	500 mm/20", 4.3/0,169" core diam. 3-thr
10-100-1010	200 mm/8", 4.3/0,169" core diam. 3-thr	10-100-1035	500 mm/20", 5.15/0,200" core diam. 2-thr
10-100-1011	200 mm/8", 5.15/0,200" core diam. 2-thr	10-100-1036	500 mm/20", 5.15/0,200" core diam. 3-thr
10-100-1012	200 mm/8", 5.15/0,200" core diam. 3-thr	10-100-1037	600 mm/24", 4.3/0,169" core diam. 2-thr
10-100-1013	250 mm/10", 4.3/0,169" core diam. 2-thr	10-100-1038	600 mm/24", 4.3/0,169" core diam. 3-thr
10-100-1014	250 mm/10", 4.3/0,169" core diam. 3-thr	10-100-1039	700 mm/28", 5.15/0,200" core diam. 2-thr
10-100-1015	250 mm/10", 5.15/0,200" core diam. 2-thr	10-100-1040	700 mm/28", 5.15/0,200" core diam. 3-thr
10-100-1016	250 mm/10", 5.15/0,200" core diam. 3-thr	10-100-1041	800 mm/32", 4.3/0,169" core diam. 2-thr
10-100-1017	300 mm/12", 4.3/0,169" core diam. 2-thr	10-100-1042	800 mm/32", 4.3/0,169" core diam. 3-thr
10-100-1018	300 mm/12", 4.3/0,169" core diam. 3-thr	10-100-1043	1000 mm/39", 5.15/0,200" core diam. 2-thr
10-100-1019	300 mm/12", 5.15/0,200" core diam. 2-thr	10-100-1044	1000 mm/39", 5.15/0,200" core diam. 3-thr
10-100-1020	300 mm/12", 5.15/0,200" core diam. 3-thr	10-100-1045	300 mm/12", 12mm/0,500" core diam. 2-thr
10-100-1021	350 mm/14", 4.3/0,169" core diam. 2-thr	10-100-1046	450 mm/18", 12mm/0,500" core diam. 2-thr
10-100-1022	350 mm/14", 4.3/0,169" core diam. 3-thr	10-100-1047	800 mm/32", 12mm/0,500" core diam. 2-thr
10-100-1023	350 mm/12", 5.15/0,200" core diam. 2-thr	10-100-1048	300 mm/12", 10mm/0,400" core diam. 2-thr
10-100-1024	350 mm/14", 5.15/0,200" core diam. 3-thr	10-100-1049	400 mm/16", 10mm/0,400" core diam. 2-thr
10-100-1025	400 mm/16", 4.3/0,169" core diam. 2-thr	10-100-1050	500 mm/20", 10mm/0,400" core diam. 2-thr
		10-100-1051	1000 mm/39", 10mm/0,400" core diam. 2-thr

Haglöf Sweden® Field Gear

The Professional Choice

The Borer Starter

Foldable borer starter for easier boring into the tree and to obtain better cores in frozen wood and hardwood. The borer starter can prolong the lifetime of your borer bit by reducing the pressure on the bit. Borer starter Art no 10-500-1005.

Coretax Sharpening Kit

Sharpening Kit with sharpening stone, whetstone, beeswax, oil and/or sand. The wax is used to protect the tip and for lubrication. Sharpening kit Art no 10-500-1006.

Soil Sampler

Haglöf Sweden soil samplers made from solid steel in two lengths . 7 dm sampler length, Art no 16-102-1006. 9 dm sampler length. Soil sampler Art no 16-102-1005.

Increment Borer Holster

Leather belt holsters available in three lengths keep your increment borer assembled and out of the way while you move in the forest. Specify length for 200mm/8", 300mm/12" or 400mm/16" borer. Holster Art no 10-500-1002.

Factor Gauge

Transparent plastic with bevelled edges for optimal sighting and visibility. Practical grip for index finger and thumb eases use. Beaded chain extending to 60cm/24". Supports factors: 0.5, 1, 2, 4 or 5, 10, 20 or 40 (English) with 2 factor columns per side. Specify model on order. Factor Gauge Art no 15-102-1005.

Bark Gauge and Increment Hammer

Small and convenient tools to measure bark thickness and last years's growth in trees. Bark gauge come in mm or inch graduation. Bark Gauge Art no 10-301-1003. Increment Hammer Art no 10-302-1001.

Brush Axe

Useful for all types of outdoor work as trail blazing, pruning, and brush clearing. Exchangeable blades available in boxes of 10. Brush Axe Art no 16-101-1001.

Haglöf Sweden® Field Gear

The Professional Choice

Tallytax Electronic Counter

The pocketsize, digital Tallytax maintains thousands of registrations in six separate counters. Easy to use and reliable also in outdoor surroundings. Use the Tallytax for forest cruising, inventories, production, planning, farming, gardening, tourism, traffic control etc. Operates with a 9V battery. Tallytax Art no 15-107-1001

Enviro Roll Flagging

100% Biodegradable cellulose fiber in several different colors and combinations. Durable and resistant, yet safe for the environment and for industrial processes. Contact us for custom printing on flagging!

ENVIRO	ROLL FLAGGING
17-100-1001	Flagging blue/white
17-100-1002	Flagging red/white
17-100-1003	Flagging red/yellow
17-100-1004	Flagging yellow/blue
17-100-1005	Flagging blue
17-100-1006	Flagging green
17-100-1008	Flagging orange
17-100-1009	Flagging red
17-100-1010	Flagging white
17-100-1011	Flagging yellow

Cruising Vest

Keep instruments and tools in the right place with the Haglöf Cruising Vest. Breathable all-season nylon mesh material in beige or orange colors. Outside pockets, inner pockets, snap front closure and pocket with roll flagging dispenser. Sizes M-XXL. Cruising vest Art no 17-104-1001, specify size/color on order.

Log Tags

Scan barcodes and use Bluetooth® to send the data to your DP II Caliper. Read more on www.logtags.com. Contact us for your most efficient fieldwork system solution ever!

Haglöf Sweden®Field Gear

The Professional Choice

Walktax Thread Distance Measurer

- Classic thread meter with superior quality counter
- Measuring accuracy of app. 0.2%
- Durable construction
- Belt clip for carrying
- Simple zero-setting
- Change thread reel with gloves on
- Built-in thread cutter
- Biodegradable cotton thread

Wrap the thread four times around the measuring wheel, tie the end of the thread by the starting point, reset the counter and start walking!

WALKTAX

16-103-1002	Walktax metric thread Meter
16-103-1003	Walktax feet thread Meter
16-103-1005	Measuring thread, single roll
16-103-1006	Measuring thread 10-pack

Cotton thread spool containing 80g/2.8oz (approx.2500m/2700yds) biodegradable thread. Counter accuracy of 0.2 % in metric or feet. Housing made by strong polycarbonate plastic. Zero setting on top, no need to open the unit to reset counter. Belt clip. The increased distance from the starting point is shown foot-by-foot or decimetre-by-decimetre in the viewing window. High quality counter ensures accuracy in results. The simple and yet smart construction has proven the Walktax measurer an indispensable instrument for landscape controls, road construction, gardening and cruising.

Marktax System

A quick, easy and safe marking system with environmental concern

The unique design leaves the air free from toxic paint fumes that may cause damage to both people and to electronic equipment. Interchangeable parts include sponges, marking head, holders for caliper or hand holders and paint cartridges in boxes of 10 in 5 different bright and durable colours. Can be mounted on Haglöf calipers with custom holder to mark measured trees.

- Marktax marking system is an environmentally safe alternative with many interchangeable parts.
- Contains no hazardous spray
- Economic and practical
- Leaves small marks
- International shipping of Marktax paint is restricted. Contact us for details.

MARKTAX SYSTEM

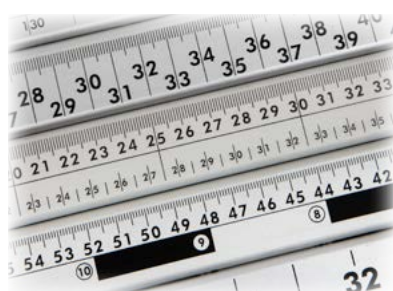|	
16-100-1001	Marktax cartridge holder caliper 400mm
16-100-1002	Marktax cartridge holder caliper 500mm
16-100-1003	Marktax cartridge holder caliper 650mm
16-100-1004	Marktax cartridge holder caliper 800mm
16-100-1005	Marktax cartridge holder caliper 950mm
16-100-1006	Marktax cartridge holder caliper 1020mm
16-100-1007	Marktax cartridge holder caliper 1270mm
16-100-1020	Paint cartridges 10-pack blue
16-100-1021	Paint cartridges 10-pack orange
16-100-1022	Paint cartridges 10-pack red
16-10-1023	Paint cartridges 10-pack yellow
16-100-1024	Paint cartridges 10-pack green
16-100-1040	Holder, hand Marktax
16-100-1041	Holder,hand with counter
16-100-1042	Holder foldable
16-100-1043	Holder foldable w counter
16-100-1044	Holder, hand Marktax
16-100-1045	Holder, hand Marktax
16-100-1046	Cartridge head
16-100-1047	Stamping pad 5-pack

Mantax Blue

Original diameter measurement

The Mantax Blue calipers feature non-reflecting aluminium scales with clear and practically non-wear digits.

Scale print on both sides, light weight and rugged. Adjustable jaws and easy to follow instructions on how to assemble and adjust the jaws included with each caliper. Mantax Blue ships in flat custom sized boxes for reduced freight and storage costs. A simple, smart, durable and economic choice of caliper!

Important Caliper Facts

Haglöf Sweden's Mantax Blue and Mantax Black calipers offer a large selection of models and variety of scale graduations and lengths. These calipers are proven functional and reliable and will last for years in any tough environment. Tested by independant institutes and PTB and FPA approved. When you require function, durability and ruggedness, for reliable field measurements in the most demanding environments on land or sea, Mantax is the caliper for you. Custom printed scales available upon request.

- **Non-reflecting Aluminium scale**
- **Large variety of sizes and graduations**
- **Easy to read digits with durable printing**
- **Affordable**

OTHER EQUIPMENT

15-103-1500	RED Gator Eyes Laser Pointers pre-assembled on pair of jaws. Specify caliper scale length for correct jaw length. Add one inch (2.54cm) to scale featured result for acccurate diameters with Gator Eyes.
11-500-1001	Holster for easy carrying of Haglöf Caliper in belt. Fits Haglöf Sweden precision calipers.
	See also Marktax marking system, this catalog

The Mantax Blue calipers wide range of applications include measuring trees & logs, wildlife management, construction, healthcare, archaeology, and geology.

MANTAX BLUE

Weight with carton:	500mm: 960g/38,4oz, 650mm: 1100g/44oz 800mm: 1200g/48oz, 950mm: 1400g/56oz, 1020mm: 1500g/60oz, 1270mm: 1800g/72oz, 800mm with meter marker 1300g/52oz. Carton weight 200-350g/8-14oz
Material Scale:	Alloy coated aluminium, non-reflective
Material Handle:	Armoured glass fiber poly carbonate plastic
Jaws:	Detachable aluminium and steel
Tested and approved:	FPA, PTB

Art no	Description
11-100-1101	Caliper 400 mm
11-100-1102	Caliper 500 mm
11-100-1139	Caliper 600 mm
11-100-1103	Caliper 650 mm
11-100-1104	Caliper 800 mm
11-100-1105	Caliper 950 mm
11-100-1138	Caliper 1000 mm
11-100-1106	Caliper 1020 mm
11-100-1107	Caliper 1270 mm
11-100-1110	Caliper 18"
11-100-1111	Caliper 24"
11-100-1112	Caliper 30"
11-100-1113	Caliper 36"
11-100-1114	Caliper 40"
11-100-1115	Caliper 50"
11-100-1116	Caliper 18" / 500 mm
11-100-1117	Caliper 24" / 650 mm
11-100-1118	Caliper 30" / 800 mm
11-100-1119	Caliper 36" / 950 mm
11-100-1123	Caliper 500 mm Triple French
11-100-1124	Caliper 650 mm Triple French
11-100-1125	Caliper 800 mm Triple French
11-100-1129	Caliper 800 mm Triple French and meter marker
11-100-1126	Caliper 950 mm Triple French
11-100-1127	Caliper 1020 mm Triple French
11-100-1128	Caliper 1270 mm Triple French
11-100-1037	Caliper 1100 mm short jaws
11-100-1140	Caliper 1250 mm 5-cm class on upper side
11-100-1052	Caliper 1520 mm short jaws
11-100-1137	Caliper 1800 mm short jaws
	Contact us for longer scales and special graduations!

Mantax Black

Patented solution and solid quality

With patented foldable jaws and accessories such as the green Gator Eyes laser pointers, the Mantax Black is an excellent choice for economic, fast and easy diameter measuring.

Mantax Black calipers have durable measuring scale print on both sides with many optional configurations. Non-reflecting aluminium scale and with special printed scale for Gator Eyes Laser Pointers in selected models.

The Mantax Black calipers are very rugged and made to last for many measuring seasons.

- **Patented technology for foldable jaws only with Haglöf Sweden Calipers**
- **Comfortable handle for all hand sizes**
- **Approved and tested by independent institutes**

Mantax Black and Gator Eyes

Aim the two perfectly aligned laser pointers as if you were actually at the stem – just pull the caliper jaws apart until the laser points are positioned where you need them to be. One inch or 2.54 cm should be added to the diameter scale result when measuring with the Gator Eyes.

GATOR EYES

Size (laser only):	123x21x23.5mm/4.84"x0.83"x1.04" ea
Operation:	Pressure switch
Weight:	92g (incl. battery)/3.25 oz
Battery:	(2)CR123A Lithium Battery
Temperature:	Tested down to +5°C/41F
Wavelength:	532 nm
Housing:	Aluminium Alloy
Output:	<1mW
Dot size at 100 m/yds:	60mm/2.25"
Lens:	Multi-coated Optical Glass Lens
Laser:	Class II laser

The Gator Eyes laser pointers have visible beam and multi coated optical glass lens for a sharp dot at farther distances. Never point with laser at humans, animals or vehicles, and note that restrictions on the use of laser pointers should be considered by the operator before use.

MANTAX	BLACK
Sizes and graduations:	500mm; 650mm; 800mm; 950mm; 18"; 24"; 30", 36"; Triple French Graduation in mm lengths. Laser scale, see Gator Eyes
Weight:	705 g/28,2oz (500mm/18" scale)
Material Scale:	Alloy coated aluminium, non-reflecting
Material Handle:	Glass fiber polycarbonate plastic
Jaws:	Foldable aluminium and steel
Tested and approved:	Patented. FPA, PTB
Art no	Description
11-200-1002	Mantax Black 500 mm
11-200-1003	Mantax Black 650 mm
11-200-1004	Mantax Black 800 mm
11-200-1005	Mantax Black 950 mm
11-200-1006	Mantax Black 1000 mm
11-200-1008	Mantax Black 18"
11-200-1009	Mantax Black 24"
11-200-1010	Mantax Black 30"
11-200-1011	Mantax Black 36"
11-200-2001	Mantax Black 500 mm green Gator Eyes Laser scale
11-200-2002	Mantax Black 650 mm green Gator Eyes Laser scale
11-200-2003	Mantax Black 800 mm green Gator Eyes Laser scale
11-200-2008	Mantax Black 18" green Gator Eyes
11-200-2009	Mantax Black 24" green Gator Eyes
11-200-2010	Mantax Black 30" green Gator Eyes

DME

The original ultrasound system for sample plot survey

Pocketsize and rugged, the DME is perfect for all types of distance measuring in the field.

The DME system offers quick and accurate readings even in difficult terrain and thick underbrush. Useful for example in sample plot work, road construction, building dimension, timber cruising and stakeouts.

Get the exact distances in English or metric units of up to 30m/98ft or more with an accuracy of +-1%. The DME is easy to calibrate and has low battery consumption.
With the "Reverse Prism" function you can use the DME on point samples, sampling a full spectrum of basal area factors (BAF's). By selecting one of the built in BAF's the DME will measure the tree's distance from the center-point then calculate the minimum diameter the tree must be to be included in your point sample. The DME instrument solution eliminates all of the limitations associated with traditional prism cruising, such as obscured views from the center.

The Transponder T3 works with the Vertex, the Vertex Laser, the Postex Laser and the DME. T3 is water resistant, rugged and has a simple construction in a bright, visible color. Pin the T3 transponder on the tree stem or use the adapter on the custom monopod to measure in sample plots. Diameter: 70mm. Weight: 85 g. Uses 1 x 1.5V AA alkaline battery, consumption max. 9mW.

Haglöf Sweden offer the ultrasound instrument solutions that work in the forest! Precise, reliable and rugged – you can depend on these original ultrasound instruments!

- **Great precision in difficult surroundings**
- **Works in dense vegetation**
- **Works when view of plot center is blocked or obscured**
- **Quick and accurate results**
- **Use two DME measuring instruments and measure distance continuos - practical to measure road width, clearance distance**
- **Reinforced monopod staff**
- **Delivered in aluminum transport safety box**

DME

Size:	30 x 40 x 125 mm / 1.2 x 1.6 x 4.9"
Weight:	90g/0.2 lb (incl. battery)
Battery:	1 x 9 Voltage alkaline,Current 7mA
Temperature:	Min -15° Max 45° C / Min 5° Max 113° F
Ultra sonic frequency:	25 kHz
Distance::	30 m/98 ft. With 360° adapter on the transponder 20 m/60 ft.
Resolution:	0.01 m / 0.1 ft
Accuracy:	1% or better
BAF factors:	0.5, 1 to 9 (m²/ha) or 5, 10, 15..to 50 (ft²/acre)

DME complete Art no 15-100-1001 compl. 360° package/
set incl. DME instrument, transponder T3, monopod, adapter.
Art no 15-100-1003 DME instrument only.
Art no 15-100-1004 DME instruments in pair. User instructions
included. Aluminum transport case.

Digital Clinometers
Electronic results, better precision
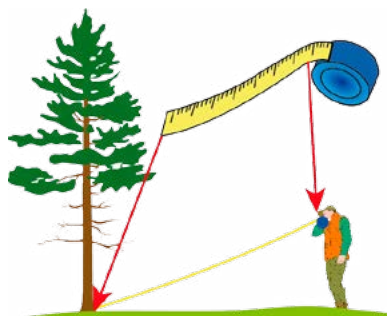
EC II
Angle + Height

- Low battery consumption
- Backlit display for easy reading
- Electronic results
- Improved accuracy
- One year full factory warranty
- Quality manufacturing in Sweden

The Haglöf EC II is an easy to use field instrument that offers accurate measuring results on inclination and heights of objects, usually trees. Heights are measured from any known distance. With electronic presentation of precision results, the EC II will serve you well for a long time, always giving accurate measurements without calibration or maintenance.

Independent tests show that divergences from the correct height were smaller when using the Haglöf EC instrument compared to analogous clinometers.

EC II Clinometer Art no 15-102-1011 Specify model on order as Feet/degrees; Feet/Percent; Meter/Degrees; Meter/Percent. Delivered with lanyard and instructions.

HAGLÖF EC II ELECTRONIC CLINOMETER

Size:	20 x 63 x 44 mm / 0,8 x 2,5 x 1,7 inch
Weight:	50 g/1,8 oz (incl. battery)
Battery:	1 x 1,5 AA alkaline. Warning when low.
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Display:	LCD, Backlit
Summer:	Yes
Consumption:	15mW
Height:	Min 0 Max 999 m/ft **Resolution:** 0,1 m/ft < 100m/ft or 1m/ft > 100m/ft
Angle:	-55˚ to 85˚. **Resolution:** 0,1˚ **Accuracy:** +-0.2˚

Baseline distances needed for height measurement are measured from the base of the tree to the user's eye. Be precise when measuring and keypunching in the distance to obtain accurate height readings!

C I Angle

- foresters
- geologists
- construction and building workers
- planning and maintenance
- golf course maintenance
- parks and recreation areas
- ski slopes and much more!

The blue C I is the ideal instrument when you wish to measure slopes and inclination of trees, buildings, walls, tunnels, roads and more. Various field professionals will appreciate the simplicity and accuracy of the C I. Simply aim and press the button and the angle is presented to you in the display.

HAGLÖF C I SLOPE MEASURER

Size:	20 x 63 x 44 mm / 0,8 x 2,5 x 1,7 inch
Weight:	50 g/1,8 oz (incl. battery)
Battery:	1 x 1,5 AA alkaline. Warning when low.
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Display:	LCD, Backlit
Summer:	Yes
Consumption:	15mW
Angles:	-55˚ to 85˚. **Resolution:** 0,1˚. **Accuracy:** +-0,2˚

C I Clinometer Art no 15-102-1012 Specify model on order as Degrees or Percent. Delivered with lanyard and instructions.

ECII-R Height + Angle + Basal area + Volume + Form Factor

The ECII-R is an electronic clinometer with factor gauge. Use the ECII-R to get quick and precise height readings from any known distance with easy handling and great accuracy. The ECII-R has adjustable form factors from 0.10...0.95 (default 0.45). Use the built-in basal area functions to count number of stems in your ECII-R, using one out of four basal area factors (0.5,1,2,4 or 5,10,20,40). The ECII-R will automatically display a calculation of the basal area and give a volume estimate based on the dominant tree height or average height. Art no 15-102-1016 m/deg or m/% (spec. unit on order) or art no 15-102-1017 ft/deg, ft/% (spec. unit on order).
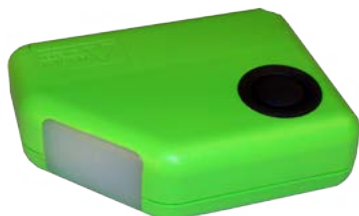
- **Height, number of stems, basal area calculation and volume estimate**
- **Adjustable form factor**
- **Basal area featured in the display**
- **Eliminates calculation errors**
- **Beaded chain extending to 60cm/24"**
- **Volume presentation based on input upper height x form factor x basal area**

HAGLÖF	ECII-R
Size:	20x63x44mm/0.8x2.5x1.7".
Weight:	60 g/2 oz (incl. battery).
Battery:	1 x 1.5 V AA alkaline.
Temp:	Min -15° Max 45° C / Min 5° Max 113°F.
Height:	Min 0 Max 999 m/ft. **Resolution:** 0.1 m/ft < 100m/ft or 1m/ft > 100m/ft.
Angles:	-55° to 85°. **Resolution:** 0.1°. **Accuracy:** +-0.2°.
BAF:	0.5, 1, 2, 4 (m²/ha) or 5, 10, 20, 40 (Ft²/acre)
Factor:	0.10...0.95, default 0.45
Volume:	Height x form factor x basal area
Unit:	m3/ha or ft3/ac/1000

HCH Angle + Height + Compass

The Haglöf HCH Compass with height function has the potential to become your next favorite forest instrument: small, accurate, fast, easy to use and giving measuring results of inclination and heights measured from any optional distance and placing in relation to the object's position in the field - and including a built-in azimuth compass 0-360° graduated in 1° increments, and accuracy to 2.5°. Ideal when building roads and power lines, demarcation of forest properties etc. Single button operation where the user can switch from compass to clinometer with one push. Built-in magnetic declination and easy calibration. For HCH height details please see the EC II instrument specification.

HCH Clinometer
Art no 15-102-1014
Height measurer, clinometer compass. Specify model on order as Metric or Feet for height readings.

HCH Clinometer
Art no 15-102-1013
Clinometer compass. Instruments are delivered with lanyard and instructions.

HCC Angle + Compass

The HCC Haglöf Clinometer Compass is a clinometer combined with a compass. Use the HCC to measure horizontal and vertical angles. This together with the compass makes the HCC great for site survey in satellite installation. Features azimuth compass 0-360° graduated in 1° increments, and accuracy to 2.5°. Clinometer measures -55° to +85°, graduated in 0.1° increments with accuracy to 0.2°.The user can switch from compass to clinometer with one push. Built-in magnetic declination and easy calibration. The HCC Clinometer Compass measures in degrees.

HAGLÖF HCC/HCH CLINOMETERS

Size:	20 x 63 x 44 mm / 0,8 x 2,5 x 1,7 inch
Weight:	50 g/1,8 oz (incl. battery)
Battery:	1 x 1,5 AA alkaline. Battery warning.
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Display:	LCD, backlit display
Summer:	Yes
Consumption:	15mW

Vertex IV

Accurate and reliable results on distance and height in the forest

The Vertex instrument is many forester's primary choice for precision height, angle and distance measurement work in the forest. Vertex works in dense vegetation and thick undergrowth.

The Vertex instrument has aluminium housing, sealed electronics and a large, easy-to-read alphanumerical display. A built-in tilt sensor allows for exact height measurement in slopes and on hills. Infrared or Bluetooth® transmitter enable direct transfer of results to peripheral devices. WIth the Vertex IV you can measure distances up to 30 meters, multiple heights per object and sample plot radii, limiting distances and diameters for BAF point samples and more.

The Vertex IV - ultrasound technology that really works in the forest!

The Vertex uses ultrasound to measure distances. Unlike measuring tapes and laser instruments, ultrasound works when the reference point is obscured by branches and leaves. The ultrasound signals wrap around obstacles to find the shortest way and determine the distance to the target. Heights are calculated trigonometrically using the variables obtained when measuring angle and distance. The Vertex IV instrument works with the transponder T3 pinned to the tree or placed on the custom monopod for sample plot surveys.
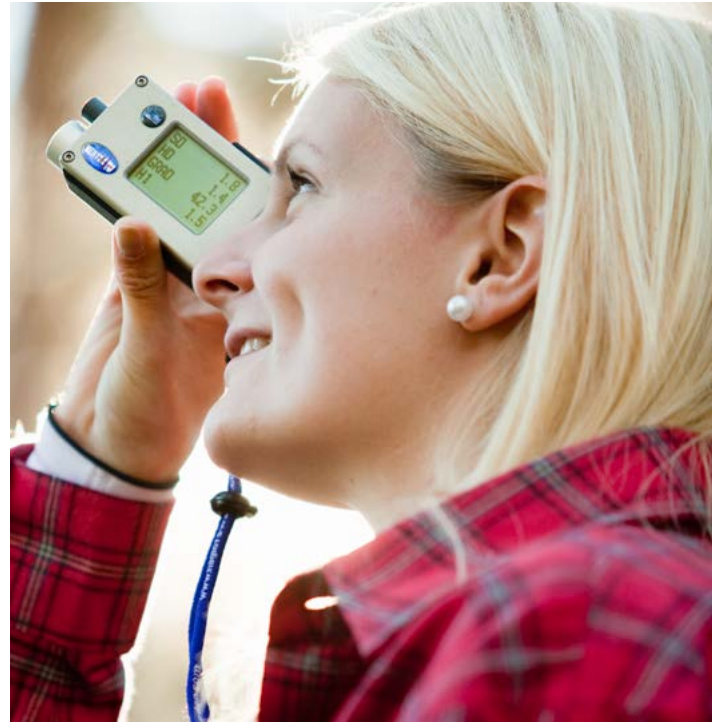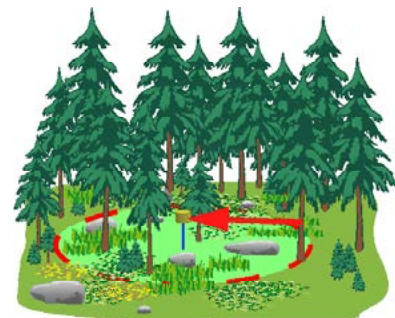

VERTEX IV

Size:	80 x 50 x 30 mm / 3.2x2x1.2 Inch
Weight:	160 g / 5.6 oz (incl. battery)
Battery:	1 x 1,5 AA alkaline, Current 20mA with Bluetooth 150mA
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Wireless interface:	Bluetooth, IR
Signal:	Built-in loud speaker
Ultra sonic frequency:	25 kHz
Height:	Min 0 Max 999 m/Yds **Resolution:** 0.1 m/ 0.1 ft
Angles:	-55˚ to 85˚ grads / -60˚ to 94˚ **Resolution:** 0.1˚
Distance:	30 m / 98 ft with 360° adapter 20 m / 60 ft . **Resolution:** 0.01 m/ 0.1 ft **Accuracy:** 1% or better
BAF factors:	0.5, 1 to 9 (m²/ha) or 5, 10, 15..to 50 (ft²/acre)

TRANSPONDER T3

Size:	Diameter 70 mm/2,8"
Weight:	85 g/5 oz (Incl. Battery)
Battery:	1.5V AA alkaline
Consumption:	max 9mW

- **Reinforced display & aluminium housing**
- **Audible beep signal for measurement results**
- **Excellent to measure radius in sample plots**
- **Built-in BAF (Point sampling) functions**
- **Slope to horizontal distance conversions, measure in steep terrain**
- **Built-in Bluetooth® and IR**
- **Sealed electronics**
- **Low battery consumption**
- **Ultrasound distance measurements in dense vegetation**
- **Proven accurate & reliable technology**
- **Reference users worldwide**

Vertex works great for radius measurement in sample plots. With the built in BAF function you are able to be at the tree and determine its minimum diameter to be included into the point. The BAF function allows you to conduct accurate point samples on tracks with thick underbrush where traditional prisms fail.

Vertex IV-360 Art no 15-105-1008 compl. 360° package/set incl. Vertex IV instrument, transponder T3, monopod, adapter.
Art no 15-105-1009 Vertex IV 60° package/set incl. Vertex IV instrument, transponder T3.
Art no 15-105-1010 Vertex IV measuring instrument only. User instructions included. Aluminum case.

VL5 Vertex Laser

Foresters premium choice - modern, versatile and reliable

The VL5 Vertex Laser is a technically advanced instrument solution for height, distance and angle measurement in forest and field. The VL5 offers a variety of options to get correct measurements in all different situations and surroundings. Results are presented in a graphic LCD display and can be transferred with IR and Bluetooth. The VL5 can also store and process field data and present calculated figures on the spot.

- **The VL5 is the most complete, compatible and communicative field measurement instrument system.**
- **The bright orange color instrument housing is reinforced, shock- and drop proof and secured.**
- **Angle compensated/horizontal distance value and tilt sensor.**
- **Ultrasound and laser combination technology.**
- **Bluetooth® and IR communication.**
- **Features all advantages from the L5 Laser and the Vertex IV instruments in a unique combination.**
- **Reverse prism factors (BAF-factors) 5-50 (English) / 0.5-9 (Metric).**
- **Long distance measuring capacity.**
- **Data storage & processing capacity.**
- **Incorporated functions for borderline/hazard trees, safety distance, tree limit, line clearance and delta height.**
- **Red cross aim for easy spotting of tree tops & thin objects.**
- **Adjustable laser filter: closest-farthest-strongest.**
- **Rechargeable built-in Li-Ion battery.**
- **Easy operation with field adapted keypad and step-through menu.**
- **Perfect in the forest, for logging, wood and timber industry, utility applications...**
- **Customization possibilities.**
- **Accessories include reflector/transponder T3, monopod for transponder T3, monopod with footbracket.**

The VL5 is excellent both in the forest and for construction, utility and industrial applications. Great accuracy and measurement range, rugged and fully field adapted. User friendly with several unique functions, integrated technology and a built–in mounting point for camera–type monopods when a steadier aim is required.

VL 5	VERTEX LASER
Size:	93x63x72mm/3.7x2.5x2.8".
Weight:	243 g/8.6oz.
Battery and consumption:	Rechargeable Li-Ion 3.7V, built-in, approx. 9000 measurings. Charging time max 3.5h. USB mini B interface wall charger 110/220AC/5VDC; car charger adapter 12VDC. Cable Usb mini B Male/Usb Type A Male, 0.5m. Consumption max 0.9W.
Communication:	IR, Bluetooth® class 2, Spp (serial profile), pincode 12345.
Temperature:	-20° to +45° C/ -4°F-113°F.
Height:	0-999 m/ft. Resolution height: 0.1 m/ft.
Angle:	-55° - 85°. Unit: Degrees 360⁰, Grads 400⁰ and %. Resolution: 0.1⁰. Accuracy: 0.1⁰.
ULTRASOUND:	Distance: 30 m/98 ft. With **360° adapter:** 20 m/60 ft. Accuracy distance: 1% or better. Resolution distance: 0.01m/0.1ft.
LASER:	Distance: 46cm/1.5ft - 700m/2000ft depending on target. Accuracy: 4cm/0.1ft. Resolution: **0.1m/ft (0.01m/0.1ft in DME-mode).**
Shock/Vibration/Moist/ Laser Classification:	MIL-STD-810E. Housing frame material glass filled poly carbonate, IP67, NEMA6, Laser class 1, 7mm (FDA, CFR21) Class 1m (IEC 60825-1:2001).
Sight:	LED crosshairs 1 x magnification.
Display:	Graphic LCD 100x60pixles.
Dataformat:	Nmea or Ascii.
Memory:	2000 dataset, non-volatile.
Other information, details, accessories etc.	Transponder T3 for ultrasound measuring (1 ea AA 1.5V alkaline battery necessary for T3, power consumption 9mW). Adapter and monopod staff, 4-parts (33-140cm) weight approx. 270g/9.5oz. Aluminum transport/storing case. See user manual for more details.

The built–in VL5 Li-Ion battery can be charged in the office, the car or in the field with a portable power bank. Portable power charger, art no 13-600-1070. Car charger art no 13-600-1069.

VL5 Art no 15-103-1020 compl. VL5 360° package/set incl. VL5 instrument, transponder T3, plot centre staff, adapter, and charging cable. Art no 15-103-1021 VL5 60° package/set incl. VL5 instrument, transponder T3, charging cable and adapter.
Art no 15-103-1022 VL5 measuring instrument only. User instructions included. Aluminum transport case. Built-in Li-Ion battery in measuring instrument. Transponder uses AA battery.

L5 Laser

Great capacity and range, data processing and storage

- Long range, height and angle measurements with high-quality laser technology.
- Rugged, reinforced, drop- and shockproof blue housing.
- Bluetooth® and IR communication.
- Data storage and processing capacity.
- Hazard trees, safety distance, tree limit, line clearance.
- Delta height calculation.
- Red cross aim for easy spotting of thin objects.
- Adjustable laser filter - closest, farthest, strongest.
- Rechargeable built-in Li-Ion battery.
- Easy operation with field adapted keypad and step-through menu.
- Perfect for forestry, logging and wood industry, power distribution and utility applications, shooting ranges, construction and more.
- Custom order measurement functions.
- Optional accessories include camera-type monopod with foot bracket for direct use on instrument for a steadier aim.

L5 LASER   **Bluetooth**

Size:	93x63x72mm /3.7x2.5x2.8".
Weight:	243 g/8.6oz.
Battery and consumption:	Rechargeable Li-Ion 3.7V, built-in, approx. 9000 measurings. Charging time max 3.5h. USB mini B interface wall charger 110/220AC/5VDC; car charger adapter 12VDC. Cable Usb mini B Male/Usb Type A Male, 0.5m. Consumption max 0.9W.
Communication:	IR, Bluetooth® class 2, Spp (serial profile), pincode 12345.
Temperature:	-20° to +45° C/ -4°F-113°F.
Height:	0-999 m/ft. Resolution height: 0.1 m/ft.
Angle:	-55° - 85°. Unit: Degrees 360⁰, Grads 400⁰ and %. Resolution: 0.1⁰. Accuracy: 0.1⁰.
Laser:	Distance: 46cm/1.5ft - 700m/2000ft depending on target. Accuracy: 4cm/0.1ft. Resolution: **0.1m/ft.**
Classification:	MIL-STD-810E. Housing frame material glass filled poly carbonate, IP67, NEMA6, Laser class 1, 7mm (FDA, CFR21) Class 1m (IEC 60825-1:2001).
Sight:	LED crosshairs 1 x magnification.
Display:	Graphic LCD 100x60pixles.
Dataformat:	Nmea or Ascii.
Memory:	2000 dataset, non-volatile.
Other information, details, accessories etc.	Camera-type monopod 15-103-1531. Aluminum transport/storing case. See user manual for more details.

The L5 Laser instrument is a great instrument choice for long range measurement in open areas. With the L5 instrument you can measure distances shorter than 0.5m/1.5ft up to 700 meters/2300ft with great precision and accuracy. The L5 is used in areas such as forestry and utility industry, power line and maintenance work and for accident prevention.

A laser filter allows for flexible measuring, where you can select to measure the closest object, the farthest object or the object that submits the strongest signal.

The L5 has a built-in Li-Ion rechargeable battery. An illuminated adjustable red haircross improves sighting and spotting of individual lines and other objects. The L5 instrument is rugged with a reinforced and balanced housing. IP67 water resistant, with user friendly interface, fully integrated technology, and built-in mounting point for camera-type monopod if a steadier aim is required. Includes several integrated special functions for added value. Different custom models available and possibility to customize according to your requirements.

L5 Art no 15-103-1030 package/set incl. L5 instrument, charging cable with adapter. User instructions included. Aluminum transport case. Li-Ion battery built- in measuring instrument.

L5^{Custom} Pile Inventory and control made easy

Use the L5*Custom* Pile Laser instrument solution to control the size of your inventory. With a series of simple measurement operations, advanced calculations are performed as a one-person and single-instrument job. Pile lengths and heights are measured with great accuracy and the total volume is processed, calculated, and instantly presented to you. Results can be stored or transferred to PC or handheld.

- Measure piles of wood and wood chips
- Obtain your field data with accuracy and precision
- Control and calculate volume and have results presented instantly
- Report within seconds.
- Wireless transfer, store and process in the instrument
- Measure close to the pile or from a distance with extended laser range
- Avoid pacing and climbing in hazard areas
- Work comfortably without paper and pen
- Use in all weather conditions and temperatures
- Rechargeable Li-Ion battery and laser filter
- Easy access to measurement modes and menus with field adapted keypad
- Rugged, reinforced and sealed housing in high-visibility blue color
- Specified, tested & approved by independent industry pro's
- Ask for more custom functions for your L5*Custom* instrument

The L5*Custom* Pile instrument has been designed for efficient inventories of timber piles or wood chip heaps. The possibility to measure distances from 0.5m or 1.5ft is a great advantage when working on plants and logyards, as it allows you to get measurement results without stepping, climbing and pacing in insecure areas. A pile of wood or wood chips can be divided in several sections. Set variables such as width (log length), assortment and volume factor in percentage. The instrument will store and process all data in the non-volatile memory for results on total volume, mean values for pile width, percentage of wood volume and more. Instrument specification, see L5 Laser.

Several different incorporated methods enable you to measure the section lengths. It is possible to measure piles from a straight angle, starting at one corner to measure the total length of the pile, followed by a series of height measurements to obtain mean height.

❄ Bluetooth®

L5 *Custom* Pile Art no 15-103-1032 Control incl measuring instrument, charger and charging cable, user guide and aluminum case.

L5^{Custom} Gator Eye^{REb}

❄ Bluetooth®

- Great complement to theodolite total stations for quick controls and fast results
- Custom model to measure in dark surroundings and under-ground
- Suitable for mining industries and cave examinations
- Easy target with the aligned high visibility laser pointer
- Radio Enter button - trigger on monopod for convenient operation
- Follow the Gator Eye laser beam and register when target is reached
- Data storage and processing capacity
- Custom programming possibilities
- Adjustable laser filter: closest-farthest-strongest
- Bluetooth® and IR built-in for result transfer
- Developed and manufactured in cooperation with industry and user specifications

This L5*Custom* Gator Eye is designed to measure distance, angles and heights in caves and mines where daylight is limited and targets are difficult to see and/or hit. The L5*Custom* Gator Eye model is delivered complete with a high visibility green laser pointer on the L5 instrument, and custom-built monopod with Radio Enter Button. Measurement results are conveniently registered and stored in the instrument. Aim with the high visibility Gator Eye laser pointer at your target distance. Register the measurement result with the Radio Enter Button mounted on the monopod. Instrument and Gator Eyes specifications, see this catalog.

L5*Custom* Gator Eye Art no 15-103-1033 package/set incl. L5 instrument with Gator Eye laser pointer, charging cable with adapter, camera-type monopod with Radio Enter Button. User instructions included. Aluminum transport case. Li-Ion battery built-in measuring instrument; coin cell battery in Radio Enter button.

Postex® Positioning

Positioning in permanent sample plots with ultrasound and laser

- Use Postex® for individual positioning in coordinate systems.
- A Postex system can have different contents depending on user areas.
- The Postex Laser measurement instrument is often used with Haglöf Sweden computer caliper DP II or Digitech Professional and software Postax. Other system configurations can contain the DP II, a DP Postex Module and L5 laser for height measurements.
- Data can be exported as a CSV file, which can be easily consumed for visualization and analysis in, for example, ArcGIS Online.
- The Postex® system allows you to gather more field data in less time and using reliable technology. Developed in collaboration with leading scientists.

The Postex® system is mainly used to position trees and objects in permanent sample plots. Individual positioning of trees with the Postex® is a proven reliable work method for moderate accuracy demands as when connecting "ground truth" measurements to aerial LiDAR surveys.

Postex® Laser is an excellent tool to follow up individual trees in long term study projects on permanent sample plots. One person can measure and electronically capture all of the tree/object data and position calculations. The Postex® system has been developed in cooperation with leading scientists and foresters, and is based on proven durable instruments and functional software from Haglöf Sweden®.

The Postex Laser instrument includes both ultrasound and laser technology for easy and accurate height measuring of individual trees. It has a user friendly and rugged exterior combined with a smart interior and advanced functionality. With ultrasound you will not be limited to line of sight measurements, and not bound to targets. Seedlings may not make for good laser targets, but with ultrasound, you can position them precisely. One person can measure and electronically capture all of the tree data and position calculations.

POSTEX LASER Bluetooth®

Size:	93x63x72mm/3.7x2.5x2.8".
Weight:	243 g/8.6oz.
Battery & consumption:	Rechargeable Li-Ion 3.7V, built-in, approx. 9000 measurings. Charging time max 3.5h. USB mini B interface wall charger 110/220AC/5VDC; car charger adapter 12VDC. Cable Usb mini B Male/ Usb Type A Male, 0.5m. Consumption max 0.9W.
Communication:	IR, Bluetooth® class 2, Spp (serial profile), pincode 12345.
Temperature:	-20° to +45° C/ -4°F-113°F.
Height:	0-999 m/ft. Resolution height: 0.1 m/ft.
Angle:	-55° - 85°. Unit: Degrees 360⁰, Grads 400⁰ and %. Resolution: 0.1⁰. Accuracy: 0.1⁰.
ULTRASOUND:	Distance: 30m/98 ft or more. With **360° adapter:** 20m/60ft or more: Accuracy distance: 1% or better. Resolution distance: 0.01m/0.1ft.
LASER:	Distance: 46cm/1.5ft - 700m/2000ft depending on target. Accuracy: 4cm/0.1ft. Resolution: **0.1m/ft (0.01m/0.1ft in DME-mode).**
Shock/Vibration/Moist/ Laser Classification:	MIL-STD-810E. Housing frame material glass filled poly carbonate, IP67, NEMA6, Laser class 1, 7mm (FDA, CFR21) Class 1m (IEC 60825-1:2001).
Sight:	LED crosshairs 1 x magnification.
Display:	Graphic LCD 100x60pixles.
Dataformat:	Nmea or Ascii.
Other:	Aluminum transport/storing case. See user manual for more details.

TRANSPONDER

Size:	Diameter 70 mm/2.8" per transponder.
Weight:	85g/5oz (incl battery) per transponder.
Battery:	1.5V AA Alkaline per transponder.
Consumption:	max 9mW.
Rack:	Complete with adapters, approx. weight 4.85kg/194oz. Adapter/TRP at 115cm/44.85" from centre, arm extending to 125cm/48.75". Rack expandable.

Postex Laser Art no 15-103-1040

Postex Laser is the most common Postex system model, often used together with a Haglöf Sweden computer caliper such as the DP II or Digitech Professional. Postex Laser can also be used as a separate solution for positioning of individual objects in the field, and with different handheld computers.

The art no includes the Postex Laser measuring instrument transponders A, B and C with Postex custom rack, adapters for the transponders and a spirit level (for alignment). Charging cable, charger and aluminum transport case also included on delivery. Details on the DP Postex module: see this catalog. Contact us for other system configurations of the Postex® system.

MD II

Digital Bluetooth®caliper for efficient field data collection

- Bluetooth caliper for efficient field data capture
- Communicates with PC, handhelds, SmartPhones and tablets
- Patented and certified technology
- Rugged, dependable and completely field adapted
- Moisture and dirt protected electronics and display
- Handles up to 25 different tree species
- Non-incremental measuring system
- Choose from different communication alternatives: PC software for stand tables, lists and classifications; straight download with USB cable or custom App to phones and tablets.
- Designed to improve accuracy and add value and use to investments in corporate management systems and field computers
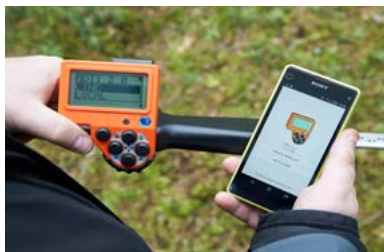- Haglöf Sweden®Quality Craftsmanship - experience and know-how in every detail

The MD II is a caliper hybrid, designed for efficient field data collection and wireless Bluetooth® communication.

The MD II caliper is made for speedy collection and storing of data of trees with details on **species, diameters and heights**. The rugged MD II computer terminal (less than 140 g) can be detached from the measuring scale and conveniently carried in your pocket for download to PC with the USB communication cable in your office.

Data can also be sent to handheld computers and **Android mobiles or tablets** with built-in Bluetooth®. In additions, th MD II can be used as a **virtual keyboard** to send wireless data to spreadsheets, mail or SMS.

MD II Com PC communication program from Haglöf Sweden® offers extended processing and reporting of your field measurement data. Name of tree species, cruising method and data interpretation from MD II are defined in MD II Com. Field data can be added to an

object, and complete cruising or sample plot survey can be selected Data can be exported to Excel as a tab-separated txt-file or printed out as a list of trees in 1-, 2- or 4-cm classes with appurtentant sample trees and plot sample data.

MD II	Bluetooth
Memory capacity:	>10 000 registers
Processor:	Low power 32 bit Arm based processor.
Temperature:	Min -20° Max 60°C / Min -4° Max 140° F.
Battery:	Battery: Rechargeable Li-ion (1ea terminal +1 ea SmartScale, USB-interface charge. Consumption: One week/charge.
Buttons:	Execution Enter + Enter on Smart-Scale handle Navigation 4 arrow keys. Quick commands: Display light Turn off, Escape and Vertex/VL5 height input.
Measuring system:	500mm; 600mm, 650mm; 800mm; 950mm; 1000mm. 18"; 24"; 30"; 36".
Measuring range:	From 500mm/18" to 1000mm/36" (standard).
Weight:	Caliper and terminal: <1kg/2.20 lbs (500mm/18" standard). MD II Terminal only: 150g/6oz.
Display:	Graphic, 128 x 64 pixles backlit, graphic interface.
Communication:	USB 2.0 MSD; Bluetooth® (SPP, OPP) Keyboard, Vertex/VL5 IR receiver
Signal:	Built-in loudspeaker.
Classification:	P67 Moist/dust resistant, CE, FCC

Data can be stored in the non–volatile memory in MD II or transferred online with Bluetooth to the custom MD II Com App for Android. Data is saved in XML format and can be shared over email, Google Drive, Dropbox or other. Heights are measured with VL5 or Vertex instruments and transferred to MD II with IR.

The MD II Com app works with Android smartphones and tablets.

MD II **Art no 14-430-3001--3006** MD II digital caliper in selected length/graduation (500mm, 600mm, 650mm; 800mm, 950mm, 1000mm; 18", 24", 30", 36". Aluminum safety case, USB cable, USB adapter, USB car adapter.
Art no 14-101-1007 MD II Com PC Communication program for PC
MD II Com App for tablet/SmartPhone: Download from Google® Play.

DP II Computer Caliper

First in function and flexibility

- Rugged and versatile with flexible operation modes
- Patented & certified technology
- Moisture & dirt protected, sealed & secure
- Great communication capacities
- Great customization possibilities
- Unique accessories for improved efficiency
- Haglöf Sweden® Quality Craftsmanship - experience and know-how in every detail

The DP II is a powerful and versatile computer caliper built for timber cruising, log scaling, standing tree inventory and harvester calibration. With many attractive features and unique accessories, the DP II caliper offers optimized and customized solutions for diameter measuring in forests and on industries.

The market leading caliper DP II has patented foldable and heavy-duty jaws with a slim shape that allow for comfortable measuring in dense forests and timber piles. With a **Radio Enter Button,** the **SmartScale** can be used as a stand-alone unit, and send diameter data to the DP II computer terminal placed on your wrist or in a pocket. For standard DP II calipers, a mechanical enter button is placed on the handle for improved comfort and reach.

The DP II **communicates** through the dirt & moist-proof comport and built-in Bluetooth, IR and USB. It has sturdy construction with reinforced housing and field adapted display and keyboard, rechargeable **Li-Ion** batteries and a **patented, sealed, absolute measuring system** in lengths from 500mm or 18" to 1020mm or 40" in various configurations.
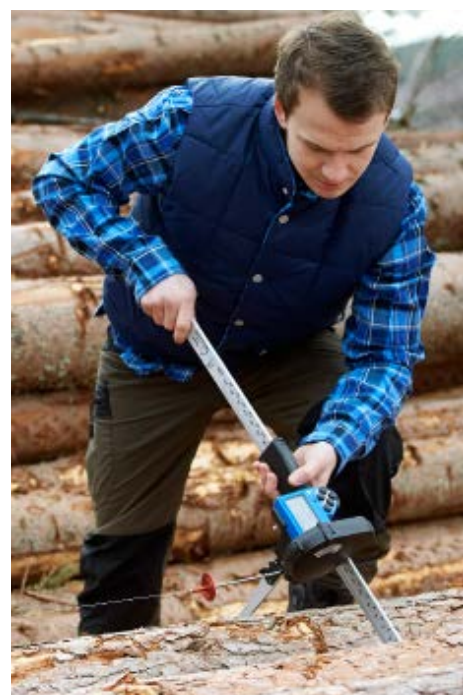
With the **Skalman v7** system, the DP II is optimized for harvester calibration applications and the only solution that **fully complies with the new StanForD 2010 calibration standard,** with the **flex scaling** method and using the unique electronic **Digitech® Tape.**

Other value-adding add-ons for the DP II include **the Gator Eyes laser pointers, the Digitech® Keyboard, the DP DME** for distance measuring, **the DP GPS** for navigation and the **DP Postex** for positioning work.

A large selection of readymade **software applications** in various languages allows even complete beginners to immediately start working in complex measuring operations.

Use the Radio Enter button to execute diameter re-sults and send wireless data to the DP II computer for storing and processing.

DP II Computer Caliper Basic Model
Art no 13-430-1001--1005
DP II Bluetooth® Caliper complete standard set incl. SmartScale caliper in specified scale length and configuration from 500mm to 1020mm/18"--36"; DP II computer terminal, aluminum safety case, USB cable, USB adapter, USB car adapter, AC/DC international charger.

DP II Computer Caliper with Radio Enter Button
Art no 13-430-1201--1205
DP II Bluetooth® REb Caliper including Radio Enter Button SmartScale in specified scale length and configuration from 500mm to 1020mm/18"--36"; DP II computer terminal, aluminum safety case, USB cables, USB adapter, USB car adapter, AC/DC international charger. Wrist holder is included when ordering the DP II with Radio Enter Button.

DP II Computer Caliper with Gator Eyes
Art no 13-430-2001--2003
DP II Bluetooth® Gator Eyes set including SmartScale with Gator Eyes laser pointers in specified length and configuration 500mm; 650 mm or 800 mm (18", 24", 30"), DP II computer terminal, aluminum safety case, USB cables, USB adapters, USB car adapter, AC/DC international charger. See more on Gator Eyes in this catalog.

DP II	◉ Bluetooth®
Memory:	1GB Flash File System non-volatile high security. 1Mb high-speed ram.
Processor:	Low power 32 bit Arm based processor.
Temperature:	Min -20° Max 60° C/ Min -4° Max 140° F.
Energy:	**Battery:** Rechargeable Li-ion, USB-interface charge. **Consumption:** One week/charge/ software depending.
Buttons:	Execution Enter + Enter on SmartScale handle Navigation 4 arrow keys. Quick commands: Display light Turn off, Escape and Vertex/VL5 height input.
Measuring system:	Technical: Non contact, sealed. Scale: Aluminum, non reflecting, clear digits. Jaws: Foldable aluminum.
Measuring range:	500mm; 650mm; 800mm; 950mm; 1020mm. 18"; 24"; 30"; 36"; 40". (standard). Scale lengths German certification/classification: 500mm; 600mm; 800mm; 1000mm. For detailed specification on the SmartScale, see separate leaflet.
Weight:	**Caliper and terminal:** <1kg/2.20 lbs (500mm/18" standard). DP II Terminal only: 150g/6oz.
Display:	Graphic, 128 x 64 pixles backlit, graphic interface.
Communication:	USB 2.0 MSD; External serial port via adapter, USB (CDC) via adapter. Bluetooth® (SPP, OPP), Keyboard, IR receiver for Vertex/ VL5/L5
Clock:	Real Time Clock with calendar and time.
Signal:	Built-in loudspeaker.
Classification:	PTB, FPA, IP67 Moist/dust resistant, CE, FCC.

Forestry Software

With a DP II® computer caliper and your custom software, you are always field-ready-to-go. Put our more than 20 years of experience from custom programming of forest and field applications to the test! Below are a few of the hundreds of solutions we have developed to save time and improve efficiency in outdoor measurement around the world. Read more, contact us - and put the right value to every tree!

HMS is a complete system with a Forest Suite containing contacts, properties, stands and objects and functions to measure standing trees, infringement, thinning follow-up and map handling/GIS.

• In HMS you work with collaborative workspace. All applications have one user interface.

• Store data in Microsoft® SQL database.

• Connect information on contacts, properties, stands and objects

• Publish dynamic interactive reports.

• Exchange data between application modules and field equipment.

• Calculate volumes, height curves and assortment exchange. Work with different pricelists for income and costs. See lists of standing trees, calculations, net value, handle digital maps...

• The dynamic structure of HMS enables you to interact with colleagues around the world. Learn from others and share your knowledge!

• Operating languages Swedish, English. Other languages: ask for details.

Skalman® v7 with the DP II caliper is the leading calibration system for harvester machines. Full compliance with new international standards
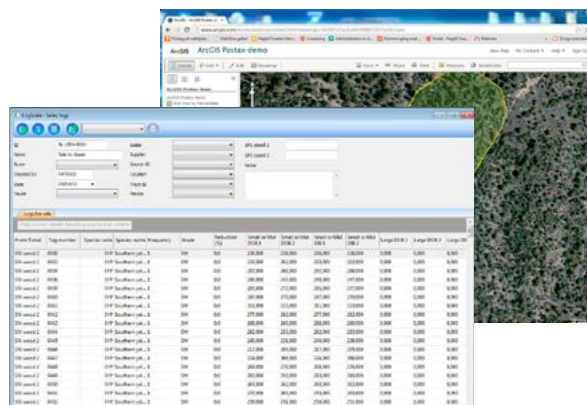
• Skalman v7 & DP II system is adapted for use in all harvester brands and bucking computers with customized holders.

• USB communication and automatic file transfer.

• Flexible scaling with the Digitech® Tape measuring tape, only with Haglöf Sweden® Skalman® system.

• Full compliance with HQC-files, StanForD standard and other international calibration standards.

• Calibration potential, decrease warnings, cutting suggestions based on true values.

• The Skalman system has been developed with branch experts, research institutes, forestry industry, machine manufacturers and operators for optimal compliance and efficiency.

• Operating languages Swedish, English, German, Finnish, Russian, Estonian, Latvian, Polish, Czech, French, Spanish, Portuguese.

Timber Inventory Measuring Systems - TIMS - a ready-to-use software solution for DP II to measure standing trees, timber and logs

• Logs: Register tree species, length, bark thickness, diameter, product and quality.

• Preset adjustable bark thickness reduction per species in volume calculations.

• Stem volume calculated on cylinder volume, defined by length and diameter under bark.

• Length, width and height of wood piles measured and adjusted for pile volume.

• Sample plot or complete area measure: Register basal area. Volume and number of trees per acre are accounted for.

• TIMS calculates a height-curve for each separate tree species. User adjustable form factors or form height per species.

• TIMS is very versatile and supports add-ons such as Digitech Tape, Digitech Keyboard, Vertex and VL5, DP GPS and more...

• Operating language: English. Other languages: ask for details.

Our Log Scaling system promotes an even and smooth work flow and automatic length registration with the Digitech® Tape.

• The DP II caliper and Digitech® Tape improve measurement accuracy and speed in log scaling.

• Mathematical functions to simplify sample measurement, control logs, follow up, fully integrated for less erroneous registers and less time spent collecting data.

• Work with proven functional technology. Systemize every step of the operation, from standing tree to board.

• Work in a seamless system and rational operation with PC and caliper integrated.

• Integrate instruments and factors and get more out of your time.

• Operating languages and systems adapted for Sweden/Scandinavia and English/North America.

Digitech®*Pro* Solutions

Seamless work - integrated technology

Haglöf Sweden's DP II caliper works with different software-run add-ons and accessories, designed to improve accuracy, efficiency and versatility. With add-on instruments mounted on the DP II Com-port, battery power and display are supplied from the computer caliper, giving you one less thing to worry about.

DP GPS — The DP GPS - navigate, position, revisit and stay connected

Image shows DP GPS DME module on DP II terminal. The terminal is necessary to work with modules DP GPS, DP Postex and DP DME.

The DP GPS module enables you to navigate and position with the DP II computer caliper. The DP GPS is very useful for example to revisit plots and measured areas.

With the DP GPS on your DP II computer caliper and corresponding software you can collect, register and connect coordinates and get all tree data gathered in one place. When revisiting an area, it is easy to find the correct tree or other object.

Your field data and positions are transferred over to the cutting or follow-up team, saving time and ensuring compliance.

The DP GPS has a 33-channel high-sensitivity receiver that supports several satellite systems such as GPS, Glonass, Galileo and GZSS. The ability to use several satellites from different systems at the same time improves positioning in difficult terrain. The GPS module is attached on the DP II comport and does not affect balance or weight.

Built-in real time correction with SBAS (EGNOS, WAAS, MSAS, GAGAN) allows for accuracy to 2.5m/8.19ft in open terrain.

Algorithms can predict satellite positions for up to 3 days, using data from last used satellite constellation saved for up to one month in the GPS with a built-in rechargeable battery.

The DP GPS module features host-based multi-global navigation satellite system: GPS(Usa)/ GLONASS(Russia)/Galileo(EU)/QZSS(Japan) SBAS Satellite-based augmentation systems: WAAS(USA), EGNOS(EU), GAGAN(India), MSAS(Japan). Built in self-generated orbit prediction (Faster TTFF up to 3days), Built in jamming removing. Accuracy: Automatic Position 2.5m CEP (circular error probable) (50% 24 hr static, -130dBm). Speed 0.1m/s, (50%@30m/s). Also available: DP GPS DME - GPS module for the DP II including integrated ultrasound distance measuring device. Art no 13-600-1081 DP GPS. 13-600-1082 DP GPS DME (module only)

DP Postex® — The unique Postex® system for positioning of individual objects - great in long-term studies and follow-up work

Image shows DP Postex module on DP II terminal

The DP Postex module is recommended for Postex operators that wish to work with ultrasound in the DP II caliper, and use for example the L5 Laser to measure tree heights. The DP Postex is used to measure the distance to the transponder for the individual tree and set its coordinates in the point.

The DP II and software (for example the Postax application) will calculate and process input field data.
The DP Postex module can also be used with without the DP II caliper measuring scale and attached to the DP II terminal only when no height data is required, for example in plantations, in nurseries, for historic and archaeological research etc.

Art no 15-100-1005 DP Postex measuring module. Image above shows DP Postex mounted on DP II caliper, rack and transponders.

Contact us for more system configurations with Haglöf Sweden instruments and software applications for navigation and positioning work!

Digitech®*Pro* Solutions

Use technology to get more out of your fieldwork

DP DME

Use Haglöf Sweden's® ultrasound technology proven to work for distance measuring in the forest! Excellent for plot survey.

Image shows DP DME module on DP II terminal

- Is the tree within the sample plot limits? The DP DME delivers a reading of distance from the center of the tree to the plot center. The DP DME measures distances with Haglöf Sweden's classical ultrasound technology, tested, proven functional for instruments such as the VL5, the Vertex IV and the DME.
When the DP DME is assembled on the DP II with software, the distance to the plot centre can be measured and registered for your border trees at the same time as the tree diameter is measured and registered. Position the T3 transponder in the centre of the plot on the monopod staff. Walk around the plot anti-clockwise, measure diameters and distance to the T3 in the centre. The distance is monitored and registered as a compensated value - the centre of the measured tree - for better accuracy.
Art no 13-600-1064 DP DME complete set incl DP DME module, transponder T3, monopod, adapter. Delivered in transport case.

DP DME

Dimensions:	57x30x30mm, 2.28"x1.2"x1.2".
Weight:	25g, 1oz.
Power supply:	3.3V external feed. Consumption: 7mA.
Ultrasonic frequency:	25kHz
Unit:	cm / set in receiving software.
Accuracy:	1% or better.
Distance:	0-30m (max); >20m w 360° adapter
Protocol:	NMEA
Interface:	RS232 19200,8,N,1.
Accessories:	Transponder T3, monopod, adapter.

Digitech® Tape

Measure log lengths, record instant results

Attach the Digitech Tape to the DP II computer terminal com-port to measure and record log lengths without having to read digits or scales.

The Digitech Tape is a great help in log scaling and harvester calibration applications. It can also work as an electronic diameter tape when used with the computer terminal only. All functions are run and determined through the computer software.

The Digitech Tape measuring wire is made from several plaited metal threads, forming a strong, flexible, yet non-stretch wire, that is easy to handle and that extends to approximately 7.5m or 24ft. A built-in break prevents the wire from retracting too quickly. The Digitech Tape holder is rugged and made from resistant and shock- and drop-proof plastic. The tape uses the DP II battery for energy supply and its display to feature measuring results. Art no 13-600-1019.

- **Better accuracy**
- **Minimizes error sources**
- **Use for flex-scaling with Skalman® v7 harvester calibration system**
- **Durable, resistant, light weight**
- **Steel wire 7,5 meters/7 yds**
- **Tested & approved by independent user groups**
- **Perfect for log optimization**

Use the protection cap on the sharp end hook to pull the measuring wire straight out from the Digitech Tape holder.

DIGITECH TAPE

Size:	150 x 110 mm
Weight:	230 g
Color:	Black
Temperature:	Min -15° Max 45° C / Min 5 Max 113 F
Housing:	Poly-carbonate plastic
Max.Length	7,5 m /7 yds
Signal:	Built-in loudspeaker
Wire:	Reinforced steel wire
Output:	ASCII format, 19.200BPS
Accuracy:	+/- 5mm at max.length
Battery:	External supply, 3.5V

Digitech®*Pro* Solutions

Improve results and get more work done in the field

Radio Enter Button

Great reach and wireless transfer

- **Log measuring**
- **Cross scaling**
- **Measuring in piles**
- **Standing tree inventory**
- **Large tree diameters**

Order your DP II computer caliper with the Radio Enter Button factory assembled if you wish to work with the SmartScale measuring scale as a stand-alone unit.

The DP II computer terminal can be placed on your wrist or in a pocket. The SmartScale is used as a regualr diameter caliper. transferring results to the DP II

terminal. The lean and light SmartScale is convenient and comfortable to use in timber piles and dense forests. Execute a diameter measurement result with the Radio Enter Button and it is instantly transferred to the DP II terminal for storage and processing. The Radio Enter Button is compatible with all Haglöf Sweden software applications including the Skalman® v7.

Specification in short: 2.45Ghz, GFSK 1Mbps. Radio format: Internal, binary. 1x CR2032 coin cell battery, approx. 1 year use.
The Radio Enter button is factory installed on DP II calipers and replaces the standard right hand button on the DP II handle.

Digitech® Keyboard

Many data variables in the field

Image shows Digitech Keyboard on DP II terminal

- **Collection of different species in biodiversity research**
- **Lumberyards**
- **Industrial inventories**
- **Log scaling with different classifications and qualities**
- **National forest inventories**
- **Plantations and nurseries**

The Digitech® Keyboard is suitable for operators that collect extensive field data in permanent sample plots and when cruising and measuring timber and using numerous variables.

With the Digitech Keyboard, thousands of alpha-numeric combinations and extensive field data can be registered and connected seamlessly to each individual object.

The Digitech Keyboard is installed on the DP II caliper comport. The keyboard can be used with or without the measuring scale, and it uses the computer battery and display for operation. The keyboard has been developed following operators' specifications and in cooperation with professional user groups.
The Digitech Keyboard is rugged and built for industrial and field applications.
Art no 13-600-1044

DIGITECH	KEYBOARD
Size:	100x50x37mm/4.3x2.0x1.5″.
Weight:	55g/2oz.
Keyboard:	10-key membran switch.
Material:	Reinforced polycarbonate glass fiber.
Temperature:	Min -30° Max 70°C / Min -22° Max160°F.
Digits:	0 - 9.
Alpha numeric:	Capital A-Z and Û, Å,Ä,Ö.
Multitap mode:	Automatic multitap.
Power Supply:	Low current 3V/2mW External feed.
Auto detect:	Digitech Pro Bios V1.35 and later.

Digitech®*Pro* solutions

Upper stem diameter and diameters at a distance with the DP II computer caliper and Gator Eyes laser pointers

Aim the two aligned laser pointers as if you were actually at the tree – just pull the caliper jaws apart until the laser points are positioned where you need them to be. Gator Eyes laser pointers and corresponding software can be used to measure tree diameters at a preset height with the built–in clinometer function in the DP II caliper. Note that all functions are software application depending.

- Use the Gator Eyes to measure tree diameters from a distance, upper stem diameter and branches
- Avoid climbing, carrying long sticks and heavy ladders in the field.
- Great when water streams or wind throws make it difficult to reach a tree.
- Gator Eyes can increase the speed of your measurement work
- Combine Gator Eyes laser pointers with software run clinometer function to measure and register heights with your DP II computer caliper

Never point with laser at humans, animals or vehicles, and note that restrictions on the use of laser pointers should be considered by operator before use.

Haglöf Sweden caliper models Mantax Black and DP II can be equipped with Gator Eyes laser pointers.

Gator Eyes are used to measure diameters and upper stem diameter from ground level and from a distance. If you are working with Gator Eyes on a Haglöf Sweden computer caliper, the built-in clinometer function and corresponding software can be used to measure inclination and tree diameters at specific heights.

The precision of the software run clinometer function is user dependant and around 0.2°. with a height precision of approx. 0.1m and a resolution of 0.1°. The diameter measurement results should be adjusted with one inch/2.54 cm when using Gator Eyes. This adjustment can be automatic (software adjusted) in the DP II computer caliper. The caliper weight will increase with approximately 190g/7.6oz with Gator Eyes installed. The Gator Eyes are factory installed and aligned on order.

GATOR EYES

Size (laser only):	123x21x23.5mm/ 4.84"x0.83"x1.04" ea
Operation:	Pressure switch
Weight:	92g/3.25 oz incl battery
Battery:	2)CR123A Lithium battery
Temperature:	Tested down to +5°C/41°F
Wavelength:	532 nm
Housing:	Aluminum Alloy
Output:	<1mW
Dot size at 100m/yds:	60mm/2.25"
Lens:	Multi-coated optical glass lens
Laser:	Class II laser

- **Haglöf Sweden solutions offer functionality, reliability, integratated functions and add-ons for multitasking capacity.**

- **Cruise, work in circular sample plots, measure large diameters, classify, coordinate properties and owners, capture, locate, position, revisit, log scale, measure diameters at a distance, determine increment, age and effects over time, compare stand areas and values.**

- **Visit www.haglofsweden.com to read more on our products and software solutions. Contact us and let us help you make your fieldwork more efficient than ever!**

Haglöf Sweden is a family business with long experience from manufacturing measurement systems for professional operation in forest and field. All our instruments and solutions have been developed in Northern Sweden, where pine trees grow straight and forests are dense and dark. Read more about our company and products at www.haglofsweden.com